

ABSTRACT OF THE DISCLOSURE

A V-groove is formed in a platform of single crystal silicon by anisotropic wet etching based on its crystal orientation, and a convexity of an optical element chip is fitted in an intermediate portion of the V-groove.

- 5 Quadrangular frustoidal convexities are formed in rows and columns on a single crystal silicon wafer by anisotropic wet etching, then a photonic crystal filter element is formed as an optical element on the protruding end face of each convexity, and the wafer is cut for each optical element into individual optical element chips. When optical fibers are disposed in the V-groove at
- 10 both sides of the chip, cores of the optical fibers and light inlet and outlet ports of the optical element are aligned with each other.